# Eicosanoic acid, tetradecyl ester

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|---|---|
| **Other names:** | Tetradecyl eicosanoate |
| **Inchi:** | InChI=1S/C34H68O2/c1-3-5-7-9-11-13-15-17-18-19-20-21-22-24-26-28-30-32-34(35)36- |
| **InchiKey:** | XGBICALCKYSGFD-UHFFFAOYSA-N |
| **Formula:** | C34H68O2 |
| **SMILES:** | CCCCCCCCCCCCCCCCCCCC(=O)OCCCCCCCCCCCCCC |
| **Mol. weight [g/mol]:** | 508.90 |
| **CAS:** | 22413-04-3 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 1.48 | kJ/mol | Joback Method |
| hf | -989.89 | kJ/mol | Joback Method |
| hfus | 86.60 | kJ/mol | Joback Method |
| hvap | 100.43 | kJ/mol | Joback Method |
| log10ws | -12.92 | | Crippen Method |
| logp | 12.272 | | Crippen Method |
| mcvol | 497.360 | ml/mol | McGowan Method |
| pc | 508.18 | kPa | Joback Method |
| rinpol | 3547.92 | | NIST Webbook |
| rinpol | 3547.92 | | NIST Webbook |
| tb | 1053.61 | K | Joback Method |
| tc | 1347.22 | K | Joback Method |
| tf | 545.10 | K | Joback Method |
| vc | 1.964 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1818.58 | J/mol×K | 1053.61 | Joback Method |
| cpg | 1849.65 | J/mol×K | 1102.55 | Joback Method |
| cpg | 1877.82 | J/mol×K | 1151.48 | Joback Method |
| cpg | 1903.31 | J/mol×K | 1200.42 | Joback Method |
| cpg | 1926.37 | J/mol×K | 1249.35 | Joback Method |
| cpg | 1947.21 | J/mol×K | 1298.29 | Joback Method |

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|---|---|---|---|---|
| cpg | 1966.09 | J/mol×K | 1347.22 | Joback Method |
| dvisc | 0.0002762 | Pa×s | 545.10 | Joback Method |
| dvisc | 0.0001060 | Pa×s | 629.85 | Joback Method |
| dvisc | 0.0000510 | Pa×s | 714.60 | Joback Method |
| dvisc | 0.0000287 | Pa×s | 799.36 | Joback Method |
| dvisc | 0.0000180 | Pa×s | 884.11 | Joback Method |
| dvisc | 0.0000123 | Pa×s | 968.86 | Joback Method |
| dvisc | 0.0000089 | Pa×s | 1053.61 | Joback Method |

# Sources

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|---|---|
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C22413043&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |

# Legend

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|---|---|
| **cpg:** | Ideal gas heat capacity |
| **dvisc:** | Dynamic viscosity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |

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